

Patent claims

1. Optoelectronic arrangement having:
 - at least one emission component,
 - 5 - a monitor component, which is assigned to the emission component and detects part of the radiation radiated by the emission component,
 - a driver circuit electrically connected to the emission component and the monitor component,
 - 10 - a carrier substrate,
 - the driver circuit being formed as a circuit integrated into the carrier substrate and
 - the monitor component likewise being integrated into the carrier substrate,
 - 15 - the emission component being formed as a separate structural part and being arranged on the carrier substrate.
2. Arrangement according to Claim 1, the monitor
20 component being a photodiode whose pn junction is integrated into the carrier substrate.
3. Arrangement according to Claim 1, the emission
25 component being formed as a vertically emitted laser component which is fixed above the monitor component on the carrier substrate, part of the laser light being radiated upward and part of the laser light being radiated downward on to the monitor component.
- 30 4. Arrangement according to Claim 3,
 - the laser component having a laser substrate and a laser resonator,
 - the laser resonator being arranged at that side of the laser component which is remote from the
35 carrier substrate,
 - the laser substrate having, at the side facing the carrier substrate and in a manner adjoining the laser resonator, a cutout in such a way

that downwardly radiated light falls on to the monitor component.

5. Arrangement according to Claim 3,
- 5 - the laser component having a laser substrate and a laser resonator,
- the laser resonator being arranged at that side of the laser component which faces the carrier substrate, and
- 10 - the laser substrate having, at the side remote from the carrier substrate and in a manner adjoining the laser resonator, a cutout in such a way that light is coupled out upward.
- 15 6. Arrangement according to Claim 5, the laser component being arranged with the top side downward on the carrier substrate and in this case having both electrical contacts at the top side.
- 20 7. Arrangement according to Claim 1, the emission component being formed as a laser chip.
8. Arrangement according to Claim 1, the emission component being connected to the carrier substrate by
- 25 adhesive bonding and wire bonding.
9. Arrangement according to Claim 1, the emission component being connected to the carrier substrate by flip-chip mounting.
- 30 10. Arrangement according to Claim 3, an array of vertically emitting laser components and respectively assigned monitor components being provided, and, in the case of each laser component, part of the laser light
- 35 being radiated upward and part of the laser light being radiated downward on to the associated monitor component.

11. Arrangement according to Claim 10,
- the array of vertically emitting laser components having a common laser substrate and a plurality of laser resonators,
 - 5 - the laser resonator in each case being arranged at that side of the laser component which faces the carrier substrate, and
 - the laser substrate in each case having, at the side remote from the carrier substrate and in a
 - 10 manner adjoining the laser resonators, a cutout in such a way that light is coupled out upward.
12. Arrangement according to Claim 10, the laser components of the array being connected as redundant
- 15 components.
13. Arrangement according to Claim 3, the carrier substrate being transparent to the radiated light.
- 20 14. Arrangement according to Claim 3, the emission component emitting light having a wavelength of between 650 and 850 nm.